## AMENDMENTS TO THE CLAIMS

1.-7.    **Cancelled**

8.    **(Previously presented)** A transgenic mouse comprising a polynucleotide encoding a mutant mouse parkin2 protein, said polynucleotide comprising a mutation in SEQ ID NO: 1 as set forth in Table 1 or 2.

9.-13.    **Cancelled**

14.    **(Currently amended)** A method of producing a transgenic mouse comprising:

constructing a vector that carries an isolated or purified polynucleotide encoding a mutant mouse parkin2 protein, said polynucleotide comprising a mutation in SEQ ID NO: 1 as set fourth in Table 1 or 2;

introducing said vector into <u>mouse</u> embryonic stem cells;

injecting said <u>mouse</u> embryonic stem cells into <u>mouse</u> blastocysts;

placing said <u>mouse</u> blastocysts into a pseudopregnant female mouse thereby impregnating said female;

obtaining a pup as a result of such impregnation, wherein said pup is a chimeric mouse, and

mating said chimeric mouse ~~or rat~~ thereby producing the transgenic mouse.

15.    **(Previously presented)** A mammalian model for a neurodegenerative disease comprising the transgenic mouse of claim 8.

16.-21.    **Canceled**

22.    **(Previously presented)** A method according to claim 14, further comprising obtaining a descendant of the transgenic mouse by breeding said transgenic mouse with the same or any other genotype and wherein said descendant of the transgenic mouse comprises a mutant mouse parkin2 protein wherein said mutant is set forth in Table 1 or 2.

23.-32.    **Canceled**

33.    **(Previously presented)** The transgenic mouse of Claim 8, wherein said mutation is present in at least one of Exons 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12 of SEQ ID NO: 1.

34.    **(Previously presented)** The method of Claim 14, wherein said mutation is present in at least one of Exons 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12 of SEQ ID NO: 1.

35.    **(Canceled)**

36.    **(Canceled)**

37.    **(Previously presented)**   The transgenic mouse of Claim 33, wherein said mutation in Exon 4 is a frame-shift mutation.

38.    **(Previously presented)** The method of Claim 34, wherein said mutation in Exon 4 is a frame-shift mutation.